

## **SOURCES SOUGHT**

### **SOLICITATION NUMBER:**

DTFH6117R00022

### **NOTICE TYPE:**

Sources Sought

### **TITLE:**

Leveraging Augmented Reality Technology for Highway Construction

### **PROGRAM BACKGROUND:**

The main challenges in construction management and any field operations are the lack of real-time and integrated information, gaps between planned solutions and practical implementations, quality assurance (QA), and communications between project participants. As a result of the rapid advancement in computer interface design and hardware, Augmented Reality (AR) may be a tool to help overcome some of these challenges.

AR is an immersive technology which combines virtual computer-generated information with the real environment in the real-time performance, enhancing the user's perception of reality and enriching the provided information content. Such information can assist project managers and engineers with the delivery and accuracy of their construction projects, safer and in a timely manner resulting in greater efficiency. With the capability of navigating through all phases of a construction project, managers would be able to catch any errors or mistakes before they present themselves or change and augment the design and construction details. Considering its benefits and success in the entertainment and video game industries, leveraging AR could be the next big development in construction management of highway infrastructure assets.

### **SYNOPSIS:**

The objective of this study is to identify the availability, accessibility, and reliability of using AR for construction inspection and review, QA, training, and improved project management through real-time information in a real world environment. AR has a potential to reduce the construction cost, improve the delivery time, and assist with overall management of a construction project. It is of interest to the Federal Highway Administration (FHWA) to conduct a comprehensive study to investigate available AR technology, its reliability and practical application and how this technology can be applied for construction management. The study shall document potential advantages, limitations, shortcomings, and cost of using AR as well as issues which could represent new challenges for the future. The study shall also document methodologies used to store, retrieve, and archive big data information obtained through the use of AR. The project shall conduct case studies of AR application to assist in encouraging wider usage of AR in construction management of highway infrastructure.

## **REQUIRED CAPABILITIES:**

At a minimum, the needed expertise will include:

1. Significant experience in highway construction management.
2. Knowledge of various Augmented Reality (AR) systems and their characteristics.
3. Capabilities and demonstrated understanding of how AR systems could be applied for construction inspection and review, training, and improved project management.
4. Capabilities and demonstrated understanding of the data, models, IT tools, etc. currently used in construction by highway agencies and how AR systems could fit in.

The Contractor's management team shall integrate excellence in, business operation, and research management with sufficient technical depth to perform world-class research. The estimated period of performance for the project is 20 months.

## **ELIGIBILITY:**

The North American Industry Classification System (NAICS) Code is 541330 with a Small Business Size Standard of \$15.0 million. All potential sources, regardless of whether they are large or small in accordance with the NAICS size standard, are encouraged to submit a capabilities statement in response to this sources sought.

## **SUBMISSION DETAILS (CAPABILITIES STATEMENT):**

Interested businesses shall submit responses electronically to the Contracting Officer, Tamiko Aikens, in Microsoft Word 2010 or Adobe Portable Document Format (PDF) at [Tamiko.aikens@dot.gov](mailto:Tamiko.aikens@dot.gov) **no later than 12:00 pm Eastern Standard Time on March 17, 2017**. No phone or email solicitations with regard to the status of the Request for Proposal (RFP) will be accepted prior to its release. Specific details will be provided in a solicitation which will be posted at <https://www.fbo.gov/>. Be advised that periodic access to the website is essential for obtaining updated documentation and the latest information regarding this procurement. All data received in response to this sources sought, marked or designated as corporate or proprietary, will be fully protected from release outside the Government. Information and materials submitted in response to this request WILL NOT be returned. Classified material SHALL NOT be submitted as well as marketing materials, slide presentations, or technical papers.

**Interested businesses should submit a brief capabilities statement package (no more than ten (10) one-sided, 8.5x11inch pages in length** with font no smaller than 10 point) demonstrating the ability to perform the services listed in this notice. Vendor responses shall include the following administrative information:

1. Company Name, Company Address, and Point(s) of Contact including name, telephone number(s), fax number(s), and email address(es).
2. Respondents to this notice also must indicate whether they are a large business or qualify as a Small Business (SB), Small Disadvantaged Business (SDB)

certified under the SBA 8 (a) Program, Women-Owned Small Business (WOSB), HUBZone Small Business (HUBZone), or Service-Disabled Veteran Owned Small Business (SDVOSB) Concern.

3. Company profile to include number of employees, annual revenue history (average over the last three completed fiscal years), office location(s), **DUNS number, and a statement regarding current small/large business status.**
4. Prior/current corporate experience performing efforts of similar size and scope within the last three years, including contract number, federal customers, indication of whether as a prime or subcontractor, contract amount, Government point of contact with current telephone number, and a brief description of how the referenced requirement relates to the services herein.
5. Resources available such as corporate management and key personnel to be assigned to tasks under this effort to include professional qualifications, and specific experience of such personnel.
6. Statement regarding capability to obtain the Department of Transportation (DOT) security clearances for personnel.
7. Please note that under a Small-Business Set-Aside, in accordance with FAR 52.219-14, the small business prime must perform at least 50% of the work themselves in terms of the cost performance.
8. Company's ability to begin performance upon contract award.

All responses must be sufficient to permit agency analysis to determine bona fide capability to meet requirements.

**Primary Point of Contact:**

Tamiko Aikens, Contracting Officer

Email: [Tamiko.aikens@dot.gov](mailto:Tamiko.aikens@dot.gov)

Phone: 202-366-3092

**Contracting Office Address:**

Department of Transportation (DOT) / Federal Highway Administration (FHWA)

Office of Acquisition & Grants Management

1200 New Jersey Avenue, SE

Room: E65-101 Mail Code: HCFA-22

Washington, DC 20590

**DISCLAIMER:**

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